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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of

Atty. Docket

JACOBUS W. VALLEN

PHN 16,749

Serial No. 09/224,913

Group Art Unit: 2832

Filed: JANUARY 4, 1999

Examiner: T. NGUYEN

ELECTRIC BALLAST

Honorable Commissioner of Patents and Trademarks  
Washington, D.C. 20231

Sir:

Enclosed is an original plus two copies of an Appeal  
Brief in the above-identified patent application.

Please charge the fee of \$310.00 to Deposit Account  
No. 14-1270.

Respectfully submitted,

By Bernard Franzblau  
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APPEAL BRIEF

Sir:

This is an appeal from the final rejection of claims 3-5.

A notice of appeal was filed on November 30, 2000.

REAL PARTY IN INTEREST

The real party in interest in this appeal is the assignee of all rights in and to the subject application, U.S. Philips Corporation, a Delaware corporation, whose ultimate parent corporation is Philips Electronics, NV of the Netherlands.

RELATED APPEALS AND INTERFERENCES

To the best of the knowledge of the undersigned, no other appeals or interferences are known to appellants, appellants legal representatives, or assignee which will directly affect or be

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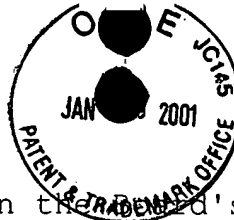


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directly affected by or have a bearing on the Board's decision in the pending appeal.

#### STATUS OF CLAIMS

Claims 1 and 2 were cancelled. Claims 3-5 are the subject matter of this appeal.

#### STATUS OF AMENDMENTS

An amendment after final rejection was filed on October 16, 2000 and was entered in an advisory action dated November 3, 2000.

#### SUMMARY OF THE INVENTION

An electric ballast (1) includes an electric coil with coil windings (115) having a width  $d$  and which are wound on a synthetic resin coil base (10) comprising a box-like base part (11) of rectangular shape having four faces (111,112,113,114). The base part is adapted to accommodate a metal core (not shown) of the coil. Mutually parallel flange (121,122), which define the width  $d$ , are provided on opposite sides of the base part (11). The coil base (10) is provided with a connection member (250) for engaging an external electrical connector. A separate insulating synthetic resin cover (20) includes as a part thereof an external insulator

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(25) which engages the connection member (250) of the coil base (10). The cover (20) engages the coil base (10) and cooperates therewith to substantially completely enclose the coil windings.

In a preferred embodiment of the electric ballast, the cover (20) has n portions (21,22) which are connected together when the cover is in engagement with the coil base so as to substantially completely enclose the coil windings (115). The end portions (21,22) of the cover connect together by snap connections (23,24).

#### ISSUES

The first issue is whether or not claims 3-5 are indefinite under the provisions of 35 U.S.C. 112, second paragraph.

The second issue is whether or not claims 3 and 5 are obvious over Witchger (U.S.P. 4,291,292) in view of Sugiura et al (U.S.P. 5,153,550) under 35 USC 103(a).

The third issue is whether or not claim 4 is obvious over Witchger in view of Sugiura et al and Leach et al (U.S.P. 4,363,014) under 35 USC 103(a).

#### GROUPING OF CLAIMS

The rejected claims do not stand or fall together since they contain different novel features and structure that are distinct

from one another. For example, claim 3 further defines the cover has having end portions which connect with each other when the cover is in engagement with the coil base so as to substantially completely enclose the coil windings. Claim 4 adds the further feature that the end portions of the cover connect with each other by one or more snap connections.

#### ARGUMENT

##### I. Rejection of claims 3-5 under 35 USC 112, second Paragraph.

The final rejection rejects claims 3-5 under 35 USC 112, second paragraph, because the claims are allegedly indefinite because of the presence of the terms "whereby" and "substantially" and because there was no antecedent basis for "the ends of the cover" at line 2 of claim 4. More particularly, the term "whereby" at claim 5 line 15 is alleged to make claim 5 indefinite, the legal basis for this rejection being the CCPA case of In re Mason, 114 USPQ 127. The Patent and Trademark Office further rejected claim 5 under 35 USC 112, second paragraph, because the term "substantially" at line 16 thereof is a relative term. The same rejection applies to the term "substantially" at claim 3, line 4.

Applicant filed an amendment under 37 CFR 1.116 on October 16, 2000 which amended claims 4 and 5 so as to avoid the "112"

rejection of these claims. Applicant further argued that the "112" rejection of claims 3-5, based on the term "substantially", was improper.

An advisory action dated November 3, 2000 entered applicants' amendment under 37 CFR 1.116, but did not indicate whether or not the amendment overcame one or more of the specific rejections of claims 3-5 under 35 USC 112, second paragraph.

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On November 9, 2000, applicant mailed a Petition to the Patent and Trademark Office requesting a new Advisory Action that clearly explained the present position of the Patent and Trademark Office as to the "112" rejection of claims 3-5. To date, applicant still has not yet received a response to the petition.

In applicants' rule 116 amendment, claim 5 was amended so as to delete the term "whereby". In addition, claim 4 was amended to provide better antecedent correlation for the term "end portions".

Applicant believes the aforesaid amendment, entered by virtue of the advisory action, overcomes the "112" rejection of claims 3-5.

Nevertheless, applicant further submits that claims 3-5, before or after the Rule 116 amendment, all satisfy the requirements of the second paragraph of 35 USC 112.

As noted above, the Patent and Trademark Office relies upon the CCPA case of In re Mason, 114 USPQ 127, for the proposition that a "whereby" statement in a claim is functional and therefore

is indefinite. This is a misinterpretation of the Mason decision. There were two "whereby" clauses considered in the Mason decision, one was inoperative because it was purely functional and did not define any structure, and therefore could not serve to distinguish a product claim over the prior art. The Mason court considered a second "whereby" statement in the claim at issue (claim 10), i.e. -whereby the corner portions of both webs are free--, but found that this difference over the applied prior art produced no new or unexpected result and therefore was not a patentable distinction. Thus, where a functional statement in a product claim helps to define the structure, such statement must be considered on its merits.

In claim 5 of this application, the "whereby" clause in fact helps to define the claimed structure, i.e. that the "cover (20) engages the coil base (10) and cooperates therewith to substantially completely enclose the coil windings." Furthermore, 35 USC 112 allows an applicant, in a claim for a combination, to express an element of such claim as a means for performing a specified function without the recital of structure in support thereof, thereby providing a clear approval of the use of functional language in a claim.

As to the "112" rejection of claim 5, line 15 and claim 3, line 4 based upon the Patent and Trademark Office objection to the

term "substantially", this term has been used in the claims of thousands of U.S. patents, thereby evidencing the recognition by the Patent and Trademark Office of the validity of this term in a claim. In fact, there is at least one CAFC decision upholding the definiteness and propriety of the use of the term "substantially" in a claim of a U.S. patent.

The Patent and Trademark Office objection to line 2 of claim 4 in paragraph 2 of the final rejection was corrected in the Rule 116 amendment.

In view of the foregoing, applicant submits that claims 3-5 are in full compliance with the formal requirements of 35 USC 112, second paragraph.

## II. Rejection of Claims 3 and 5 under 35 USC 103(a)

Claims 3 and 5 were rejected under 35 USC 103(a) as being unpatentably over Witchger (U.S.P. 4,291,292) in view of Sugiura et al (U.S.P. 5,153,550).

Claim 5 is unobvious and therefore is patentable over the applied prior art of record, Witchger and Sugiura et al. First of all, this claim claims an electric ballast, whereas the Witchger patent is directed to an electric coil having means for the attachment of external supply lead wires to an electromagnetic coil assembly. The



Sugiura et al patent is directed to a coil assembly for an electromagnetic valve for use in a vehicular hydraulic control circuit. Clearly, neither of these references has anything to do with any problems that exist in the art of electric ballasts and therefore no one skilled in the electric ballast art would look to either of these references in order to design an electric ballast that was intended to solve some problem or defect in prior art electric ballasts. As the reference patents are in non-analogous arts to that of applicant's invention, a higher burden of proof is placed on the Patent and Trademark Office as to the issue of obviousness under 35 USC 103.

For example, why would one skilled in the art relating to electric ballasts for discharge lamps look to the Sugiura et al patent, which deals with a vehicle hydraulic control circuit, for guidance in order to solve a problem related to an electric ballast. The electrical characteristics of devices in these two arts are so different that it would not suggest itself to the electric ballast engineer to look for solutions in the Sugiura et al patent. It is only by virtue of the hindsight provided by applicant's present patent application that a motivation is presented to the examiner to look into the Sugiura et al and Witchger prior art in order to reject the claims of this application.

It is further noted that the final rejection is not entirely

clear as to how the Patent and Trademark Office proposes to combine the two references, Witchger and Sugiura et al, in order to produce the electric ballast as claimed in claim 5 of this application. The final rejection states that Witchger discloses the claimed invention except for a connection member being integrally formed with one of the bobbin flanges and Sugiura et al discloses a bobbin having an end flange integrally supporting an external connection member, and a cover having a terminal protection portion integrally formed therewith. The examiner then concludes that it would have been obvious to mount the external connection members of Witchger on the flange of the bobbin, as suggested by Sugiura et al for the purpose of facilitating connections of the leads and placement of the cover. But the examiner's proposed modification of the Witchger device would not in fact facilitate connections of the leads and placement of the cover. The examiner's proposed modification would further complicate the Witchger device and increase its cost since it would then be inconvenient, in fact very difficult, to arrange the resilient strip cover 31 so as to cover the wire ends 21A, 22A and the coil winding wire ends 12A and 12B if external connection members of Witchger were mounted on the bobbin flange, as allegedly suggested by Sugiura et al.

It also would not be obvious to modify the Witchger device by substituting for the resilient strip (cover) 31 of Witchger the teachings of Sugiura et al, i.e. providing the connection member (12)

of Sugiura et al on the flange of the Witchger device and providing as a cover therefor the casing (20) with the integral terminal housing (21) for covering the connection member (12) as shown by Sugiura et al. This is so because the Witchger invention involves the particular use of the strip 31 and the connection thereto of the wire leads 21,22.

More particularly, the Witchger invention involves a method of attaching current supply leads to a single strip of a dielectric material conveniently attachable to a coil without the use of adhesive (see col. 1, lines 33-39 of Witchger). Also see independent claims 1 and 8 of Witchger each of which comprise an elongate strip of material and a first lead fastened to said strip. To modify the Witchger device by substituting for the elongate strip of resilient material (31) having wire leads (21A, 22A) fastened thereto, the connection member (12) of Sugiura et al on a flange of the Witchger device, along with the casing (cover) 20 and integral terminal housing (21) thereof, would defeat the purpose of the Witchger invention, as described above. In this regard, please note the Board of Appeals decision in the case of Ex parte Thompson, 184 USPQ 558, which held that in the case of a claim rejected under 35 USC 103, it would not be obvious to substitute an element of a first reference for an element of a second reference where to do so would destroy the apparatus of the second reference for its intended purpose.

Thus, it would not be obvious to modify the Witchger device by substituting for strip (31) with its attached wire leads (21A, 22A) the casing (20) with integral terminal housing (21) of Sugiura et al. Such a substitution would defeat the entire purpose and object of the Witchger invention, i.e. the novel attachment method which requires the strip (31) with its attached wire leads (21A, 22A). It also would not be obvious to mount the external connection members of Witchger on the flange of his bobbin, as proposed by the examiner.

Furthermore, if the only purpose of the Sugiura et al patent in the final rejection is to teach the mounting of external connection members on the bobbin flange, as per the last paragraph on page 3 of the final rejection, then the thin strip (31) of flexible material of Witchger (having some resilience) could not support an external insulator such as the terminal housing 21 of the Sugiura et al cover member 20, much less in a manner so as to engage a connection member on a coil base. The Sugiura et al coil assembly requires a rigid casing (cover) 20, which is not present in Witchger because the latter reference covers the windings of the coil base with a thin flexible resilient tape (31).

It therefore would not be obvious to modify the Witchger electric coil so that the cover 31 has an external connector part as defined in claim 5. The "103" rejection of claim 5 is invalid because the Final Rejection does not present the factual evidence

required by 35 U.S.C. §103 in order to set out a prima facie case of obviousness.

As to dependent claim 3, this claim recites that the "cover has end portions which connect with each other" etc. In contrast, the ends 32 and 34 of the Witchger cover (31) do not connect with each other, as is evident from Figs. 10 and 12 of this reference, as well as column 3 thereof, and especially the last paragraph of column 3 (and the first paragraph of column 4). Claim 3 is unobvious over the applied prior art since the Witchger patent does not provide the factual support to show the precise structure as defined in claim 3, wherefore the Final Rejection does not present a prima facie case of obviousness under 35 U.S.C. §103.

As to the statement at page 4, first paragraph of the final rejection, this is the mere opinion of the examiner. There is no factual support in the final rejection for the examiner's opinion, which therefore has little or no probative value on the issue of obviousness.

### III. Rejection of Claim 4 under 35 USC 103(a)

Claim 4 was rejected under 35 U.S.C. §103(a) as being unpatentable over Witchger in view of Sugiura et al and Leach et al (USP 4,363,014).

Since Leach et al does not cure any of the deficiencies noted above with respect to Witchger and Sugiura et al, any combination of these three references still would not result in the novel apparatus of dependent claim 4.

Furthermore, claim 4 specifies that the end portions of the cover connect with each other by one or more snap connections. In contrast, the end portions of the bobbin cover 14 in Leach et al do not connect with each other. The Final Rejection furthermore relies upon element 66 in Leach et al for disclosure of a snap connection means. But Leach et al refers to receptacle 66 (col. 3, line 28) into which the end 64 of a lead 20 is inserted. The receptacle 66 in Leach et al is clearly not a part of a snap connection means for interconnecting end portions of the cover member 14. In fact, the receptacle 66 of Leach et al is not even a part of the cover 14, much less an end portion thereof.

Furthermore, if the ends (32,34) of strip (31) of Witchger connect with each other by snap connections or otherwise, then the tail end (34) of strip (31) would not be free so as to be wrapped around the coil in the manner disclosed by Witchger (see col. 3 and col. 4, first paragraph of Witchger).

In view of the above, the final rejection does not present sufficient factual evidence so as to set forth a prima facie case

of obviousness as to claim 4 in the manner contemplated by 35 USC 103.

CONCLUSION

In view of the above discussion, applicant submits that claims 3-5 are unobvious over the applied prior art and are in full compliance with 35 USC 112, second paragraph. It is therefore requested that the final rejection of claims 3-5 be reversed and that all of these claims be allowed.

Respectfully submitted,

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